TELETYPE COMPATIBLE CRT TERMINAL

PRICING STUDY

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TELETYPE COMPATIBLE CRT TERMINAL PRICING STUDY

Prepared For:

INTERNATIONAL BUSINESS MACHINES CORPORATION

SYSTEM COMMUNICATIONS DIVISION

May 1979

INPUT

TELETYPE COMPATIBLE CRT TERMINAL

PRICING STUDY

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TELETYPE COMPATIBLE CRT TERMINAL
PRICING STUDY

LIST OF EXHIBITS

I INTRODUCTION

I INTRODUCTION

A. PURPOSE AND SCOPE

- This report was prepared by INPUT as a custom study for the IBM System Communications Division, Kingston, New York.

- It is an outgrowth of a previous study done by INPUT for IBM in March 1979, measuring the growth of the teletype compatible CRT terminal market.

- The objective of this study is to determine the pricing dynamics of the CRT distributor marketplace. An attempt is made to obtain large quantity distributor prices and to report on the general discount price structure from distributors to end users.

- Also examined is the distributor's

  - willingness to grant OEM status to end-users;

  - acceptance of the manufacturer's control of end user prices;

  - support offerings; and

  - general selling posture.

- User buying policies are also briefly examined.

B. RESEARCH AND METHODOLOGY

- Two questionnaires were developed by INPUT and modified by the System Communications Division of IBM at a joint meeting in Kingston, New York. One questionnaire was directed towards CRT distributors and the other towards CRT users. The questionnaires constitute Appendix A and B.

- Telephone interviews were the sole data gathering method used for both users and distributors.

- Distributors were asked if they would participate in a study of CRT buying patterns. Those that agreed were interviewed for about twenty minutes. The results are reported in Section III B of this report.

- It was more difficult finding users who:

  - had non-IBM CRT's and

  - knew details concerning how they were purchased, at what price they were obtained, and why that route was chosen.

  These findings are summarized in Section III C.

- Respondent numbers are consistent throughout this report, so a particular response set can be tracked from exhibit to exhibit.

- All prices should be considered negotiable. In the price charts (Exhibits III-14 through III-29) all empty cells represent negotiable prices. Those respondents that carried a particular CRT but would not quote prices over the telephone (Exhibit III-12) considered all prices negotiable and would quote prices if they received a request in writing on company letterhead.

- An oral presentation was made to IBM in Harrison, New York, on May 2, 1979. The material presented is Section III of this report, with minor additions as requested by IBM.

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II EXECUTIVE SUMMARY

II EXECUTIVE SUMMARY

A. DESCRIPTION OF DISTRIBUTORS INTERVIEWED

- 61% were national distributors and 39% operated regionally primarily.
- 25% had annual revenues over $10 million dollars, 32% fell between $3 million and $10 million dollars, 18% sold under $3 million dollars annually, and 25% refused to answer the revenue question.

B. DISTRIBUTOR ACTIVITY

- The average distributor interviewed:
  - shipped 800 CRT's annually,
  - sold to anyone (end-users, dealers and OEM's),
  - had a typical end user CRT order size of 3-6 with 73% of them in the 1-9 range.
- Most distributors leased and sold CRT's. The third party leasing companies preferred to lease and sometimes actively discouraged sales.

- Most distributors provided installation and maintenance support and some training.

- Pricing.

  - In general prices from the manufacturer to the distributor have been stable, but competition has forced the distributor's prices down.

  - Prices in any quantity are usually negotiable.

  - Competitive pressure frequently determines the selling price.

- General.

  - The marketplace is very chaotic at the moment.

  - Some distributors expressed a desire to operate in a more rational arena.

  - Some members of the newly formed Association of Data Terminal Distributors hope that organizing will bring about stability and, perhaps, a more ethical marketplace.

C. USER ATTITUDES

- Users preferred to buy in quantity from the manufacturers directly because they felt they would receive better maintenance and overall support.

- In some cases, users were not aware that a discount market existed and felt they didn't qualify for quantity discounts.

- The fact that some prices small quantity users paid were lower than those quoted by distributors for the maximum quantity emphasizes the "we will deal" nature of the marketplace.

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III FINDINGS

III FINDINGS

A. INTRODUCTION

- The exhibits in this section were presented orally to IBM in White Plains, New York, on May 2, 1979.

- The results of the interviews are summarized in the exhibits. Few conclusions are drawn. The general attitude expressed is summarized in the "comments" exhibits and in the text accompanying the exhibits.

B. DISTRIBUTOR FINDINGS

- Respondents 20 and 35 are the same company, respondent 35 is the home office and respondent 20 is a branch office.

- Exhibits III-1 and III-2 describe the distributor. In most cases the number of years as a distributor is equal to the number of years they have been in business. In two cases this number represents the number of years the distributor arm of a major company has been in business.

EXHIBIT III-1

TYPES OF DISTRIBUTORS

RESPONDENT	NUMBER OF YEARS AS A DISTRIBUTOR	SELL PRIMARILY		PERCENT OF BUSINESS AS A DISTRIBUTOR
		NATIONALLY	REGIONALLY	
2	1	X		30%
3	22	X		100
4	10	X		100
5	3	X		80
6	12	X		-
7	16		X	90
9	2		X	70
10	8	X		50
12	8	X		30
13	11		X	50
16	7		X	60
17	3	X		70
19	2½	X		100
20	29		X	40
21	2½	X		100
22	4	X		100
24	4½	X		-
25	10		X	95
26	10	X		100
27	9	X		100
28	3½	X		90
29	4	X		95
30	10		X	98
32	3		X	100
34	3½		X	100
35	23		X	25
37	2		X	20
39	15	X		100

EXHIBIT III-2

DISTRIBUTOR'S TOTAL REVENUE

RESPONDENT	< $1 MILLION	$1-3 MILLION	$3-5 MILLION	$5-10 MILLION	> $10 MILLION
4				X	
9		X			
12					X
13					X
16					X
17		X			
19			X		
20		X			
22			X		
24				X	
25				X	
26					X
27					X
28					X
29			X		
30			X		
32				X	
34		X			
35			X		
37	X				
39					X

- In those cases where the percent of business that is done as a distributor is close to 100%, the difference usually represents maintenance income. In some cases where this number is 100%, maintenance income is included because the respondent either couldn't or wouldn't separate it.

- All successful interviews are included in the exhibits. The original questionnaire that was field tested did not include all of the questions that appeared on the final version. Therefore, some data on respondents 2-7 is missing on some exhibits.

- On Exhibit III-3 in the CRT's shipped column, spaces beyond respondents 2-7 indicate the information was confidential or not known. Respondent 9 just started with CRT's and 500 represents his first years goal. Respondent 28 only knew the total number of terminals shipped and the author arbitrarily split the figure in half.

- Exhibit III-4 shows the percentage of end user orders in each size range. It does not show, nor can it necessarily be inferred, that the volume of CRT's shipped follows the same pattern. Considering respondent 13, the mix of order sizes adhering to the information reported in Exhibits III-3 and III-4 could be:

# of Orders	CRT's per Order	Total CRT's
80	1	80
10	10	100
6	25	150
3	50	150
1	520	520
100		1000

Most CRT's were shipped on 1% of the orders even though 80% of the orders fell in the 1-9 range.

EXHIBIT III-3

DISTRIBUTOR'S SHIPMENTS

RESPONDENT	NUMBER OF CRT's SHIPPED ANNUALLY	SELL TO END USERS	SELL TO DEALERS AND OEMs
2	NOT ON	X	X
3	ORIGINAL	X	X
4	QUESTIONNAIRE	X	X
5		X	X
6		X	X
7		X	
9	500 (GOAL)	X	X
10	-	X	X
12	300-400	X	X
13	1000	X	X
16	750	X	X
17	300	X	X
19	500		X
20	1000	X	X
21	-		X
22	1700	X	
24	1000	X	X
25	600-800	X	
26	2000-3000	X	
27	-	X	
28	1500(3000 PRINTERS PLUS CRT's)	X	X
29	200	X	
30	250	X	X
32	1500	X	X
34	500	X	
35	1000	X	X
37	100	X	
39	100 (ONLY SIX MONTHS FOR CRT's)	X	

EXHIBIT III-4

END USER ORDER SIZE

RESPONDENT	TYPICAL CRT ORDER SIZE	PERCENTAGE OF CRT ORDERS BY SIZE				
		1-9	10-24	25-49	50-99	100+
9	1-5	TOO NEW IN CRT BUSINESS				
10	2-5	NO IDEA				
12	1	DOESN'T KNOW				
13	3-4	80	10	6	3	1
16	2-3	75	15	8	2	0
17	1-3	85	10	5	0	0
20	1	WOULDN'T SAY				
22	1-20	95	3		2	
24	3-5	95			5	
25	5-10	5/80			15	
26	20	30	20	30	20	
28	10	NO IDEA				
29	1	95			5	
30	3	60	20		20	
34	1-5	WON'T GUESS				
35	1-3	80	20	0	0	0
37	1-2	99			1	
39	3-5	70	20	10	0	0

- Respondent 25 (Exhibit III-4) wanted to split the lowest range. He reported 5% of his orders in the 1-4 range and 80% in the 5-10 range.

- The home office (respondent 35 on Exhibit III-5) in this case doesn't set prices. Each salesman makes his own deal.

- Large third party leasing companies actively discourage purchases.

- Most distributors offered installation and maintenance, but installation was frequently only for the first unit or first shipment. Training of one person was frequently reported. The end-user trained person then trained additional people. (See Exhibit III-6.)

- Price changes from the manufacturer to the distributor have been stable over the last year or two. Generally it was reported that manufacturers dropped the price significantly shortly after the announcement was made and then the price was stable. (See Exhibit III-7.)

- Competitive pressures have forced the end-user price down slowly during the past years.

- Some distributors claimed they had a fixed quantity discount schedule. Many schedules could vary depending upon the competition, size of the user, and prevailing market conditions. (See Exhibit III-8.)

- Some distributors easily granted quasi OEM to large users while others asked for a reseller's certificate number. (See Exhibit III-9.)

- Exhibit III-10A indicates that distributors in general are reluctant to "make deals" with manufacturers and only do so for very large customers.

EXHIBIT III-5

END-USER FINANCIAL ARRANGEMENTS

RESPONDENT	SAME DISCOUNTS TO END USERS AND DEALERS YES	NO	DO YOU LEASE	RENT	SELL
2		X	NOT ON ORIGINAL QUESTIONNAIRE		
3		X			
4	X				
5	X				
6	X				
7		X	X	X	X
9		X	X	X	X
10	X				X
12	X		X	X	X
13		X	X	X	X
16		X	X	X	X
17		X	X		X
19	N/A				X
20		X			X
21	X				X
22	N/A		X	X	X*
24		X	X	X	X
25	N/A		X	X	X
26	N/A		X	X	X
27	N/A		X	X	X
28		X	X	X	X
29		X	X	X	X
30		X	X	X	X
32		X	X	X	X
34	X		X	X	X
35	DOESN'T KNOW		X	X	X
37	X				X
39	N/A		X	X	X*

*DISCOURAGES SALES, PREFERS TO LEASE OR RENT WITH MAINTENANCE.

EXHIBIT III-6

END USER SUPPORT OFFERED

RESPONDENT	INSTALLATION	MAINTENANCE	TRAINING
2		IBM MAINT.	
3	X	IF ABSOLUTELY NECESSARY	
4		LOCALLY ONLY	
5	X	X	
6		X	
7	X	X	X
9		X	
10	NO SUPPORT OFFERED		
12	NO SUPPORT OFFERED		
13	X	X	
16	X	X	
17	X	X	
19	NO SUPPORT OFFERED		
20	X	X	
21	X	X	
22	X	X	X
24	X	X	X
25	X	X	X
26	X	X	X
27	X	X	X
28	LOCALLY	JUST STARTING	
29	LOCALLY	X	X
30	X	X	X
32	X	X	X
34	X	X	X
35	X	X	X
37		X	X
39	X	X	TECHNICAL SUPPORT

EXHIBIT III-7

CRT PRICE CHANGES

RESPONDENT	COMMENTS
9	TOO NEW
10	STABLE
12	STABLE
13	STABLE
16	STABLE
17	DOWN RAPIDLY
19	DOWN VERY SLOWLY
20	DOWN
21	DOWN SLOWLY
22	STABLE
24	STABLE
25	DOWN SLOWLY
26	STABLE
27	TOO NEW
28	STABLE
29	STABLE
30	DOWN RAPIDLY
32	STABLE
34	DOWN
35	STABLE
37	DOWN SLOWLY
39	DOWN RAPIDLY FROM FIRST ANNOUNCEMENT

EXHIBIT III-8

END USER DISCOUNT PRICE SCHEDULE VARIABILITY

RESPONDENT	QUANTITY DISCOUNTS VARY BY END USER		VARIATION CONSIDERATIONS				
	YES	NO	USER SIZE	COMPETITION	DROP SHIP	NO INSTALL	OTHER
9	X		X	X			
10		X					
12		X					
13	X		X	X			
16	X		X	X			
17	X		X	X	X	X	OVER-STOCKED, TERMS, SUPPLY & DEMAND
19	X		X	X			
20	X		X	X			
21	X		X	X			
22	X		X	X		X	DEPOT MAINT.
24		X					
25		X					
26		X					
27	X		X				
28	X		X	X			
29	X		X	X			
30		X					
32	X		NO COMMENT				
34	X		X				
35	X						EDUCATION DISCOUNT
37		X					
39		X					

EXHIBIT III-9

END USERS GRANTED OEM STATUS

RESPONDENT	END USERS GRANTED QUASI OEM STATUS		TYPE OF USERS	PREVALENCE	UNDER WHAT CONDITIONS		
	YES	NO			NO MAINT-ENANCE	TOTAL SHIP-MENT	CHARGE BACKS
4	X		NOT ON ORIGINAL QUESTIONNAIRE				
6		X	NOT ON ORIGINAL QUESTIONNAIRE				
7	X		DEPENDS UPON ALL CIRCUMSTANCES INVOLVED				
9	NO EXPERIENCE WITH LARGE USERS						
10	X		LARGE	VERY	JUST DONE TO GET BUSINESS		
12	X		OWNER/DEALER	NO IDEA		NO IDEA	
13	X		SYSTEMS	DOESN'T	X	X	
16		X	HOUSE	KNOW			
17	X			VERY	LESS OVERALL SUPPORT		
19	X		LARGE	VERY	LOCAL DEALER SITUATION		
20	X		25-50 PIECES	VERY	LEEWAY AVAILABLE FROM MFR.		
21	X						
22		X					
24	DOESN'T KNOW						
25		X					
26	N/A						
27		X					
28	X			VERY	DEPENDS UPON ALL ASPECTS OF DEAL		
29	X		LARGE	VERY	COMPETITION - ROBINSON-PATMAN CONCERNS		
30		X					
32		X					
34		X					
35	DOESN'T SET PRICES						
37		X					
39	N/A						

EXHIBIT III-10A

WILL THE DISTRIBUTOR ACT AS A MIDDLEMAN?

RESPONDENT	YES	NO
4	X	DEPENDS ON MFR.
6		X
7		X
9	X	
10	X	
12	X	
13	X	
16	FOR LARGE ORDER WOULD SEND CUSTOMER TO MFR.	
17	X	
19	X	
20	X	
22	X FREQUENTLY	
24	X	
25		X
26	X	
27		X
28	X	
29		X
30	X	
32		X
34	X	
35		X
37	N/A	N/A
39	X	

- On Exhibit III-10B most respondents said they dropped or refused to deal with manufacturers who attempted to control their prices. Conversely, respondent 28 requests that the manufacturer check the prices in proposed advertisements so the distributor doesn't "upset the market." Respondent 39 hopes manufacturers will exercise more control so the marketplace will become stable.

- Exhibit III-11 summarizes respondent feeling on manufacturers price control.

- Exhibit III-12 shows all of the distributor respondents and the lines they carry. Those that would not quote prices over the telephone specifically stated that their prices were confidential and were dependent upon the exact conditions governing each sale.

- It is important to emphasize that the majority of the prices quoted over the telephone are not firm and are negotiable. At a quantity of one only, many distributors will have a firm price, however.

- In some cases the price quoted over the telephone differed from an advertised price. Both of these prices were occasionally different from the prices on the published price schedules sent to INPUT.

- General pricing attitudes are summarized in Exhibit III-13.

- All empty cells on the pricing Exhibits (III-14 through III-31) represent areas where distributors had no fixed prices but would negotiate.

- All prices for quantities in excess of 100 were always negotiable.

- In many cases the distributor quoted price for specific quantities is higher than the same quantity purchased from the manufacturer. There are several possible explanations:

EXHIBIT III-10B

DOES THE MANUFACTURER EXERCISE PRICE CONTROL

RESPONDENT	YES	NO	HOW
9		X	
10		X	
12		X	
13		X	
16		X	
17		X	
19		X	
20		X	
22		X	
24		X	
25		X	
26		X	
27		X	
28	X		MFR. CHECKS ADVERTISED PRICES
29	X		MFR. USED TO SET PRICE
30	X		MFR. SET SELLING PRICE-CAN'T GO HIGHER-DISTR. CAN BE ELIMINATED
32		X	
34	X		"PREFERRED CUSTOMER" STATUS
35		X	
37	X		BY CONTRACT
39	X (IN FUTURE)		

EXHIBIT III-11

RESPONDENT'S COMMENTS ON MANUFACTURER'S PRICE CONTROL

- WE REFUSED TO DO BUSINESS WITH MANUFACTURERS WHO ATTEMPTED TO CONTROL SELLING PRICE.
- SOME MANUFACTURERS (ESPECIALLY DEC) REQUIRE FULL SERVICE AND BACK-UP SUPPORT. THIS MAKES THE COST HIGHER AND IN A WAY CONTROLS THE PRICE.
- MANUFACTURER DOESN'T WANT A CUTTHROAT OUTFIT. HE ENCOURAGES ME TO KEEP PRICES UP BY MAKING ME A PREFERRED CUSTOMER - ESPECIALLY WITH DELIVERIES AND SUPPORT.
- CAN'T CUT PRICES EXCEPT ON A DEMO UNIT.
- MANUFACTURER DOESN'T GIVE LOANERS, BUT WILL SELL ONE UNIT AT THE QUANTITY 100 PRICE. IF YOU BUY MORE YOU GET THE REGULAR QUANTITY DISCOUNT.

EXHIBIT III-12

MANUFACTURER'S LINES CARRIED BY DISTRIBUTORS

RESPON-DENT	ADDS	BEEHIVE	HAZELTINE	PERKIN ELMER	LEAR SIEGLER	DEC	OTHERS
2							IBM
3			X*				
4	X*		X*				
5					X		
6	NOT YET	NOT YET	X*				
7			X	X			INFOTON
9				X*			
10			X*				SOROC* INTERTUBE
11			X				X
12			X*		X*		
13			X*		X*	X*	
16				X*	X*		
17			X*		X*		
19			X*				
20		X		X			
21			X				SOROC
22	X*						INFOTON
24						X*	
25				X		X	
26					X*	X*	
27							ZENTEC
28	X*	X*	X*	X*	X*		SOROC*
29	X*				X	X	
30							TELERAY*
32			X		X		
34					X*		
35		X*		X*			INFOTON*
37							ISC* (COLOR)
39			X*	SOON			

*QUOTED SOME PRICES ON TELEPHONE

EXHIBIT III-13

RESPONDENT'S COMMENTS ON PRICING

- NO QUANTITY DISCOUNTS FOR ANYONE. OUR PRICE IS THE SAME FOR ALL AND IT IS THE LOWEST AROUND. THAT IS WHY WE ARE ALL SOLD OUT.
- WE WILL WORK WITH ANY POTENTIAL CUSTOMER.
- WE WILL GET THE BUSINESS NO MATTER WHAT AS LONG AS WE CAN MAKE MONEY ON THE DEAL.
- NO SMALL QUANTITY DISCOUNTS GIVEN. OUR SALES PRICES ARE LOWER THAN MOST QUANTITY DISCOUNTS. LARGE QUANTITIES ARE SPECIALLY NEGOTIATED BY THE OWNER.
- ALL PRICES OTHER THAN SINGLE UNIT END USER PRICES ARE NEGOTIABLE.
- COMPETITIVE PRESSURE ALWAYS DICTATES PRICES ESPECIALLY QUANTITY PRICES.
- IT IS A DIRTY MARKETPLACE. WHEN I HAVE TO BORROW MONEY AT 14% TO BUY TERMINALS, I TURN THEM OVER AS FAST AS POSSIBLE ON ANY REASONABLE DEAL. NO PRICES ARE FIXED, I CHARGE WHATEVER I CAN. (BRANCH OF A LARGER DISTRIBUTOR.)

EXHIBIT III-14

ADDS REGENT 100 PRICING

RESPONDENT	NUMBER OF TERMINALS					
	1-4	5-9	10-24	25-49	50-99	100+
4	1325	1325	1260	1195		
22	1500*					
28	1150*					
29	1325	1325	1275	1225	1190	
LIST	1325	1285	1190	1150	1095	1065

*QUANTITY OF 1 ONLY

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-15

ADDS REGENT 200 PRICING

RESPONDENT	NUMBER OF TERMINALS 1-4	5-9	10-24	25-49	50-99	100+
4	1795	1795	1705	1620		
22	2000*					
28	1525*					
29	1795	1795	1745	1695	1625	
LIST	1795	1760	1725	1650	1525	1390

*QUANTITY OF 1 ONLY

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-16

BEEHIVE INTERNATIONAL PRICING

RESPONDENT	ALL PRICES ARE FOR QUANTITY OF 1 ONLY				
	MICRO B	MICRO B1	MICRO B1S	MICRO B2	MICRO B3
28		1120		1375	
35	995	1395	1345	1695	
LIST	995	1395	1345	1695	1995

- AS OF 2/79 THE MAXIMUM DISCOUNT AVAILABLE ON THE MICROBEE PRODUCT LINE WAS 35%.
- ON THE OLD PRODUCT LINE IT WENT AS HIGH AS 44%.

NOTE: ALL PRICES OVER THE UNIT PRICE ARE NEGOTIABLE.

EXHIBIT III-17

HAZELTINE 1400 PRICING

RESPONDENT	NUMBER OF TERMINALS 1-10	11-25	26-50	51-99	COMMENTS
3	850	850	750		
4	845	800	760		
6	595*				OUT OF STOCK
11	650*				
12	699*	SALE	REGULAR PRICE $749*		
13	695*				
14	650*				FROM AD
17	695*				
19	625*				OVERSTOCKED-SELLS TO SMALL DEALERS ONLY
28	630*				
39	850*				
LIST	850	850	850	800	

*QUANTITY OF 1 ONLY

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-18

HAZELTINE 1410 PRICING

RESPONDENT	NUMBER OF TERMINALS 1-10	11-25	26-50	51-99	COMMENTS
4	895	850	800		
12	835*				
13	875*				
17	745*				
21	765*				FROM AN AD.
39	895*				
LIST	900	900	900	850	

*QUANTITY OF 1 ONLY

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-19

HAZELTINE 1420 PRICING

- NEW ANNOUNCEMENT
- QUANTITY 1 LIST 995
- OEM PRICES

QUANTITY	
1-50	51-99
820	750

- PRICES ARE FROM PRESS RELEASE

EXHIBIT III-20

HAZELTINE 1500 PRICING

RESPONDENT	NUMBER OF TERMINALS 1-10	11-25	26-50	51-99	COMMENTS
3	1225	1175	1125	1090	
4	1195	1135	1075		
7	1160*				
10	945*	925**			ANYTHING OVER 2 IS NEGOTIABLE
12	1165*				SALE PRICE 1049*
13	1145*				
14	995*				FROM AN AD
17	1225*				
19	970	970	970	935	SMALL DEALER PRICE
21	1097*				FROM AN AD
28	1050*				ADV. PRICE 925*
LIST	1225	1175	1125	1090	

*QUANTITY OF 1 ONLY

**QUANTITY OF 2 ONLY

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-21

HAZELTINE 1510 PRICING

RESPONDENT	NUMBER OF TERMINALS				COMMENTS
	1-10	11-25	26-50	51-99	
3	1395	1350	1295	1225	
4	1345	1275	1215		
10	1085*	1045**	ANYTHING OVER 2 IS NEGOTIABLE		
12	1325*	SALE PRICE 1149*			
13	1345*				
17	1395*				
19	1070	1070	1070		SMALL DEALER PRICE
28	1150*				
LIST	1395	1350	1295	1225	

*QUANTITY OF 1 ONLY

**QUANTITY OF 2 ONLY

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-22

HAZELTINE 1520 PRICING

RESPONDENT	NUMBER OF TERMINALS				COMMENTS
	1-10	11-25	26-50	51-99	
4	1595	1515	1440		
12	1585*	SALE PRICE 1499*			
17	1650*				
19	1350	1350	1350	SMALL DEALER PRICE	
39	1650*				
LIST	1650	1595	1530	1455	

*QUANTITY OF 1 ONLY

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-23

PERKIN ELMER PRICING

RESPONDENT	BANTAM 550		FOX 1100		OWL 1200	
	1-5	6-10	1-5	6-10	1-5	6-10
9	$799**	$759**				
16	850	795	1295	1225	1995	1875
28	900*	960* AD.				
35	966*		1440*		2195*	
LIST	966*		1541*		2195*	

*QUANTITY OF 1 ONLY

**QUANTITY OF COLUMN 1 is 1-24

QUANTITY OF COLUMN 2 is 25-50

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-24

LEAR SIEGLER MODEL 1A AND 2 PRICING

RESPONDENT	NUMBER OF TERMINALS					
	MODEL 1A			MODEL 2		
	1-25	26-50	51-100	1-25	26-50	51-100
13	1395*			1745*		
16	1595**	1450**		1895**	1750**	
26	1650	1600	1550	1820	1760	1700
28	1395*			1895*		
34	1595*			1995*		
LIST	1595	1595	1595	1995	1995	1995

*QUANTITY OF 1 ONLY
**QUANTITY OF COLUMN 1 is 1-5
QUANTITY OF COLUMN 2 is 6-10

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-25

LEAR SIEGLER MODEL 3A PRICING

RESPONDENT	NUMBER OF TERMINALS				
	1-5	6-10	11-25	26-50	51-100
12	850*	SALE PRICE 755*			
13	889*				
16	895	875			
26	860	840	825	815	800
28	825*				
29	845	845	845	845	845
34	850*			775 LOWEST FOR ANY QUANTITY	
39	895*				
LIST	895	895	895	895	895

*QUANTITY OF 1 ONLY

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-26

LEAR SIEGLER MODEL 31 AND 42

PRICING

RESPONDENT	NUMBER OF TERMINALS			
	MODEL 31		MODEL 42	
	1-50	51-99	1-50	51-99
12	1615*		1795*	(NO SMALL QUANTITY DISCOUNTS)
13	1395*		1695*	
16	1450**	1395**	1795**	1695**
28	1395*	1425*ADV.	1725*	
39	1450*		1795*	
LIST	1450	1395	1795	1725

*QUANTITY OF 1 ONLY

**QUANTITY OF COLUMN 1 is 1-5
QUANTITY OF COLUMN 2 is 6-10

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-27

DIGITAL EQUIPMENT CORPORATION
MODEL VT100 PRICING

RESPONDENT	NUMBER OF TERMINALS 1-25	VT 100 26-50	51-100
4	1695*		
13	1900*		
24	1495**	1395**(PRICE DROPS 5-10% EVERY 5 TERMINALS FOR LOW QUANTITIES)	
26	1575	1510	1450
LIST	1900*		

- MAXIMUM MARGIN IS ABOUT 40% SO THERE IS ROOM TO WORK.
- DEC USED TO HAVE DISCOUNT SCHEDULE UP TO 5000 UNITS BUT NOW THE SCHEDULE CUTS OFF AT 500 UNITS.

*QUANTITY OF 1 ONLY
**QUANTITY OF COLUMN 1 is 1-4
QUANTITY OF COLUMN 2 is 5-10

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-28

INTELLIGENT SYSTEMS CORPORATION PRICING

RESPONDENT 37

TERMINAL MODEL	NUMBER OF TERMINALS			
	1-24	25-49	50-99	100+
8001	1275	1152	1025	895
8001GB	2150	1925	1725	1500
8002G	1700	1530	1360	1190
8021	2200	1975	1750	1540
8022	2600	2350	2075	1820

THESE SELLING PRICES ARE FIXED BY CONTRACT BETWEEN DISTRIBUTOR AND MANUFACTURER.

EXHIBIT III-29

SOROC IQ120 PRICING

RESPONDENT	NUMBER OF TERMINALS				
	1-4	5-49	50-99	100-249	250+
10	895*				
21	795*	(REGULAR PRICE 995*) FROM AD.			
28	795*				
LIST	995	800	750	720	695

*QUANTITY OF 1 ONLY

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-30

SOROC 1Q 140 PRICING

RESPONDENT	NUMBER OF TERMINALS					
	1-4	5-14	15-49	50-99	100-249	250+
28	1300*					
LIST	1495	1450	1400	1350	1250	1050

*QUANTITY OF 1 ONLY

NOTE: ALL EMPTY CELLS REPRESENT NEGOTIABLE PRICES.

EXHIBIT III-31

TELERAY MODEL 1061 PRICING

RESPONDENT	NUMBER OF TERMINALS		
	1-4	5-9	10
30	1190	1140	1100
LIST	1190	- QUANTITY 1 PRICE	

NOTE: PRICES FOR MORE THAN 10 UNITS ARE NEGOTIABLE.

- The distributor can provide immediate delivery.

- The distributor absorbs the shipping charges.

- The distributor will provide installation, maintenance and training.

- The distributor starts at a high price which can then be negotiated down giving the end-user a "good deal."

Not all of these explanations apply to all cases where the distributor is higher in price than the manufacturer.

- All list prices were obtained directly from the manufacturers.

- Where prices quoted over the telephone were different from those advertised, the advertised price is also indicated. Some prices came only from ads and they also are indicated.

- Respondent 19 only sold to small dealers in quantities of 1-2. His prices are also included.

- The respondents who were members of the newly formed Association of Data Terminal Distributors expressed concern about the implications of the Robinson-Patman Act in a price warring marketplace. Those distributors that attempted to act in an ethical manner felt constrained. This comment was made by two respondents.

- General comments are summed up in Exhibit III-32.

EXHIBIT III-32

GENERAL COMMENTS

- DEC VT 100 IS HOTTEST ITEM ON THE MARKET, IF YOU NEED THEM I CAN GIVE YOU A 60 DAY DELIVERY COMPARED TO DEC's ONE YEAR OR MORE.
- NO EXPERIENCE WITH LARGE ORDERS. DON'T KNOW WHAT WE WOULD DO.
- HAZELTINE 1400's ARE BEING SOLD AT A LOSS. I'M GLAD WE DIDN'T BUY ANY. IT IS NO LONGER COMPETITIVE.
- I'LL GET YOU WHATEVER YOU WANT AND WE CAN TALK ABOUT PRICES AFTER YOU WRITE ME ON YOUR LETTERHEAD.
- LARGE USERS GET SPECIAL PRICES BECAUSE LESS SUPPORT IS REQUIRED. IF ONE TERMINAL GOES DOWN AND YOU HAVE ONLY TWO IT IS CATASTROPHIC. IF ONE GOES DOWN AND YOU HAVE FIFTY IT ISN'T SO BAD.
- LEASE, IF IT IS THE ONLY WAY TO MAKE A DEAL.
- JUST GETTING INTO CRT's ESPECIALLY FOR AIRLINES. OUR INSTALLED BASE IS OVER 40,000 TERMINALS UNDER LEASE WITH MAINTENANCE. STRONGLY DISCOURAGE PURCHASE - WE SELL ONLY AS AN ACCOMMODATION.
- PRICES HAVE BEEN STABLE FROM MANUFACTUERS BUT COMPETITION HAS FORCED END USER PRICES DOWN.
- CONCERNED ABOUT ROBINSON - PATMAN IMPLICATIONS.

C. USER ACTIVITY

- It was difficult to locate users who had experience with the equipment under study. Once the user was identified it was difficult finding a person who knew the details of the acquisition. User attitudes are summarized in Exhibit III-33.

- Users in some cases didn't realize a "discount" market existed and were unaware of the quantities required for a discount.

- Users preferred the support of the manufacturer.

- Third party leasing companies were used when obtaining "large" numbers of peripherals because the terms were better.

- In general, users preferred to lease CRT's because they expected them to become obsolete fairly quickly.

EXHIBIT III-33

USER COMMENTS

- TERMINALS ARE OBTAINED IN QUANTITY FROM THIRD PARTY LEASING COMPANIES BECAUSE THEY ARE MORE FLEXIBLE IN WORKING OUT A TOTAL PACKAGE.
- OBSOLESCENCE IS VERY RAPID WITH CRT TERMINALS. DISTRIBUTORS SHOULD HAVE RESIDUAL BUY BACK GUARANTEES.
- WOULD ONLY GO TO A MANUFACTURER BECAUSE I WANT GOOD COMPETENT SUPPORT.
- COMPANY REQUIRES AT LEAST THREE BIDS. I ASSUME SOME ARE FROM THIRD PARTY COMPANIES AND DISTRIBUTORS.
- DON'T LEASE IN LARGE ENOUGH QUANTITIES TO JUSTIFY A PRICE BREAK. (350 IBM 3270's, 250 OTHER CRT TERMINALS).
- WITH THIRD PARTY LEASING COMPANY WE GET PRICE BREAKS AT LOW QUANTITY LEVELS, TYPICALLY 1-4, 5-9, 10-14, ETC.
- NEVER TRIED TO GO TO ANYONE BUT IBM.
- WE TAKE DELIVERY IN QUANTITIES OF 1-2 BUT ALWAYS GO TO THE SAME MANUFACTURER SO WE GET A QUANTITY DISCOUNT. WE NOW HAVE ABOUT 100 TERMINALS INSTALLED. THEY ALL DON'T HAVE TO BE THE SAME MODEL.

APPENDIX A: DISTRIBUTOR QUESTIONNAIRE

CATALOG NO. | Y | C | R | 3 | | | |

CRT BUYING PATTERNS

DISTRIBUTOR QUESTIONNAIRE

INPUT is currently studying CRT terminal buying patterns. We would appreciate your contributing to our study and we will send you a summary of the results when the study is completed. The information is held strictly confidential and by the statistical nature of the results no respondent can be identified.

1. How long have you been in business?

2. Do you primarily sell

☐ nationally ☐ regionally

3. About what percent of your business is done as a distributor?

4. What is your total annual revenue range?

☐ under 1 million

☐ 1 million - 3 million

☐ 3 million - 5 million

☐ 5 million - 10 million

☐ over 10 million

4A. How many CRT terminals do you sell annually?

5. Do you sell CRT terminals to end-users as well as to dealers and OEMs?

5A. What is your typical CRT order size to end users?

5B. Could you list the percent of CRT orders to end users by size?

Order Size	%
1 - 9	____
10 - 24	____
25 - 49	____
50 - 99	____
100 and over	____

6. Do you offer both groups the same quantity discounts?

☐ Yes ☐ No

7. Do you provide any type of support?

☐ Installation

☐ Maintenance

☐ Other

7A. Do you lease or rent terminals as well as sell them?

☐ Lease ☐ Rent ☐ Sell

8. What are your quantity prices for the following CRT terminals?

Manufacturer	Model	End-User					OEM/Dealer				
		Quantity					Quantity				
		1	10	25	100+	1000	1	10	25	100+	1000
ADDS	R100										
	R200										
BEEHIVE	MICROBEE										
	MICROBEE 1										
	MICROBEE 1S										
	MICROBEE 2										
	MICROBEE 3										
HAZELTINE	1400										
	1410										
	1500										
	1510										
PERKIN-ELMER	BANTAM (550)										
	FOX (1100)										
	OWL (1200)										

8A. What additional models do you handle?

Manufacturer	Model	End-User					OEM/Dealer				
		Quantity					Quantity				
		1	10	25	100+	1000	1	10	25	100+	1000

8B. How rapidly have prices changed in the past.

9. Will the discount price schedule vary from customer to customer?

☐ Yes ☐ No

9A. If so, will the user schedule vary with

☐ The size of the user and expected potential at the account (i.e. GM is a big company)

☐ Competition at that point in time

☐ Other possible issues such as

☐ Drop shipping

☐ No installation

☐ Other ________________________________

10. Will a quasi OEM status be granted to large users?

☐ Yes ☐ No

10.A What type of users?

10.B How prevalent is this practice?

10.C Can this involve such factors as

- ☐ No Maintenance
- ☐ Price for total units shipped in a time period
- ☐ No training
- ☐ Chargebacks

11. Will a distributor serve as a "middleman" and negotiate special prices, terms and conditions, between a large user and a CRT manufacturer?

☐ Yes ☐ No

11A. Does the CRT manufacturer attempt to control your selling price?

☐ Yes ☐ No

11B. If yes, how?

12. Would you please send me a copy of your published price schedules?

APPENDIX B: USER QUESTIONNAIRE

INPUT Confidential CATALOG NO. |Y|C|R|3| | | | 00002

CRT BUYING PATTERNS

USER QUESTIONNAIRE

INPUT is currently studying CRT terminal buying patterns. We would appreciate your contributing to our study and we will send you a summary of the results when the study is completed. The information is held strictly confidential and by the statistical nature of the results no respondent can be identified. In particular, we are interested in teletype compatible CRT terminals such as the ADDS R100, MICROBEE-1, HAZELTINE 1500, P-E FOX (1100), etc.

1. What kinds of buying arrangements, concessions, or "deals" are available to you from:

    a. Manufacturers

    b. Distributors

    c. Others

2. Would a manufacturer or distributor grant you a quasi OEM status at some quantity level? A quasi OEM status involves buying quantities of terminals over a period of a year or longer. The user performs such functions as maintenance and installation.

☐ Yes ☐ No

3. At what quantity level?

3A. With what terms and conditions?

3B. What functions do you, the user, perform?

4. Have you purchased CRT terminals in the last three years?

☐ Yes ☐ No

5. Which models, quantity, and options did you buy?

MODELS	QTY	OPTIONS

6. From whom did you obtain them?

7. Did you

	Models	Qty
Purchase		
Rent		
Lease		

8. Over what period of time did you receive them?

Model	Period

9. What price did you pay for them?

Model	Qty	Price	Date of Purchase

10. Approximately what discount(s), if any, did you receive?

11. Can you negotiate with multiple distributors for a "best" deal?

12. What, if anything, would you do differently if you were to buy CRT terminals in quantity again.

13. What could the manufacturers do to encourage you to buy from distributors?